



Find out how **FLEXIBLE** we can be.

At Apollo, we've been manufacturing industry-leading standard and custom-engineered microwave components and subsystems since 1980. As with all our products, our selection of twistable and non-twistable waveguide sets the benchmark for quality, value, and reliability. So if you need an unbeatable combination of exceptional performance, fast delivery, and world-renown customer support, give us a call and see how flexible we can be.



Apollo
microwaves

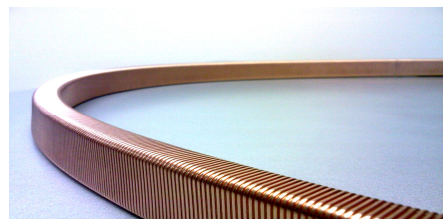
"Providing Quality and Reliability in Microwave Networks"

FLEXIBLE WAVEGUIDE

For over 25 years, Apollo has been a leading supplier of passive microwave components and sub-systems for the global telecommunications market. We pride ourselves on the quality and reliability of our wide range of standard and custom-engineered terrestrial microwave components and sub-systems.

Construction

Our flexible waveguide is manufactured in-house, in our ISO certified facilities in Montreal, Canada. The core of the waveguide consists of a silver-plated brass strip formed and helically wound around a rotating mandrel. This construction allows for simultaneous flexibility in both planes.

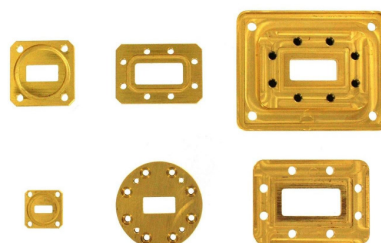


For higher power requirements, non-twistable seamless waveguide is used. Flexibility is still possible in both planes, but not twistability. Our seamless flex is constructed from precision corrugated brass tubing. The inner surface can be silver plated when lower insertion loss is required.



Flanges

Apollo offers a full range of North American and European flange configurations, irridited or plated to prevent corrosion. Special flanges can also be manufactured upon request.



Protective Jacket

The core-flange assembly is sheathed in a neoprene jacket to ensure a high standard of environmental protection (IP68), and for pressurization. We also offer a silicon jacket when higher temperature ranges are required.



Quality

Apollo's in-house manufacturing and our state of the art testing facilities (900 MHz to 60GHz) allow us to provide the highest level of quality control. We test each and every piece for insertion loss, return loss, and pressurization requirements. We have built a solid reputation of product reliability, on-time delivery, and customer support throughout the world.

SPECIFICATIONS

ELECTRICAL

WAVEGUIDE SIZE	FREQUENCY RANGE	AFT/AFS PEAK POWER	AFT			AFS		
			POWER CW	ATTENUATION	VSWR	POWER CW	ATTENUATION	VSWR
WR	GHz	kW	kW	dB/ft	<36"	kW	db/ft	<36"
650	1.12 - 1.70	10700	N/A	N/A	N/A	20	0.01	1.06
430	1.70 - 2.60	4700	N/A	N/A	N/A	20	0.01	1.07
340	2.20 - 3.30	3700	N/A	N/A	N/A	16	0.01	1.07
284	2.60 - 3.95	2000	6.5	0.03	1.04	10	0.02	1.08
229	3.30 - 4.90	1500	4.0	0.03	1.05	8.0	0.02	1.08
187	3.95 - 5.85	1250	3.0	0.04	1.05	6.5	0.03	1.09
159	4.90 - 7.05	1100	2.5	0.05	1.05	6.0	0.04	1.1
137	5.85 - 8.20	560	2.0	0.06	1.05	5.0	0.05	1.1
112	7.05 - 10.0	330	1.5	0.07	1.07	4.0	0.06	1.1
90	8.20 - 12.4	220	1.0	0.09	1.07	3.0	0.09	1.1
75	10.0 - 15.0	180	0.8	0.13	1.08	1.5	0.12	1.1
62	12.4 - 18.0	120	0.4	0.16	1.1	1.0	0.15	1.12
51	15.0 - 22.0	85	0.2	0.35	1.15	0.5	0.2	1.1
42	18.0 - 26.5	45	0.1	0.38	1.18	0.3	0.3	1.2
34	22.0 - 33.0	31	0.085	0.45	1.17	0.2	0.35	1.3
28	26.5 - 40.0	22	0.075	0.6	1.19	0.075	0.6	1.4

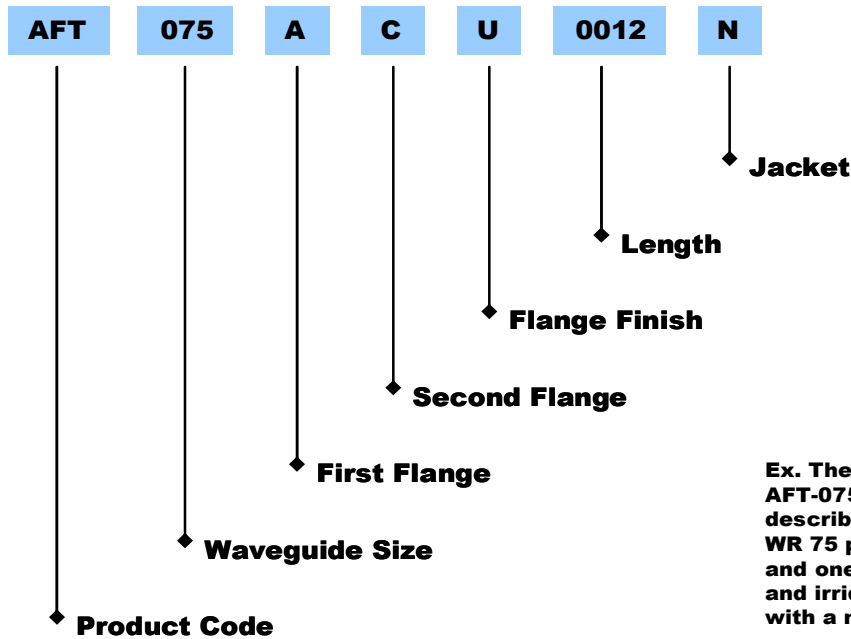
AFT – Flexible-Twistable

AFS – Flexible Seamless (Non-Twistable)

MECHANICAL

WAVEGUIDE SIZE	MINIMUM CENTERLINE BEND RADII				TWIST RATING	
	STATIC		REPEATED		MAX	
	E-PLANE	H-PLANE	E-PLANE	H-PLANE	STATIC	REPEATED
WR	Rad (in)	Rad (in)	Rad (in)	Rad (in)	deg/ft	deg/ft
650	20	40	80	160	N/A	N/A
430	12	25	48	100	N/A	N/A
340	10	16	40	64	N/A	N/A
284	7	14	28	56	32	8
229	6.5	13	26	52	40	10
187	6.5	13	26	52	48	12
159	5	10	20	40	56	14
137	2.25	3.15	9	12.6	64	16
112	2	3	8	12	79	20
90	1.5	2.25	6	9	96	23
75	1	2.15	4	8.6	111	28
62	0.9	1.5	3.6	6	136	34
51	0.85	1.2	3.4	4.8	136	34
42	0.8	1.15	3.2	4.6	160	44
34	0.7	1	2.8	4	160	44
28	0.7	1	2.8	4	180	70

FLEXIBLE WAVEGUIDE ORDERING INFORMATION



Ex. The Apollo model number AFT-075-ACU-0012-N above describes a flexible, twistable WR 75 piece, with one cover and one choke flange, unplated and irridited, 12 inches long and with a neoprene jacket.

PRODUCT CODE

Code	Core Type
AFT	Apollo Flexible Twistable
AFS	Apollo Flexible Seamless

WAVEGUIDE SIZE

Please reference WR size (28 to 650) when ordering

FLANGE SELECTION GUIDE

Code	Flange Type
A	Cover
B	Cover Grooved
C	Choke
D	CPRF
E	CPRG
F	CMR Standard Holes
G	CMR All Clear Holes
H	CMR All Tapped Holes
I	UBR (European Cover)
J	PBR (European Cover Grooved)
K	CBR (European Choke)
L	UDR (European CPRF)
M	PDR (European CPRG)
N	UAR
O	PAR
P	CAR
Q	UER (European CMR)
R	Special

FLANGE FINISH GUIDE

Code	Flange Finish
U	Unplated and Irridited
C	Cadmium-plated
S	Silver-plated
T	Tin-plated

LENGTH

2 Digits for inches

3-4 Digits for mm

JACKET SELECTION GUIDE

Code	Jacket Type
N	Neoprene
S	Silicone
P	Unjacketed and Painted
X	Unjacketed and Unpainted

Hardware kits are available in standard and customer specified configurations